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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,635	03/23/2004	Gregory I. Rozman	67010-095; B05799-AT1	2588
26096	7590	10/05/2005	EXAMINER	
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			MILLER, PATRICK L	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/806,635	Applicant(s) ROZMAN ET AL	
	Examiner Patrick Miller	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07152004; 11102004</u> | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because it contains an Internet “link” on the page. Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

2. Claims 1-15 are objected to because of the following informalities: see bullet(s) below.

Appropriate correction is required.

- Claim 1 recites, “is adapted to” (l. 3). Change to “a permanent magnet motor that is coupled with...”
- Claim 9 recites, “a load” (l. 7). It is unclear whether this limitation is the same as that recited in line 6. If so, change “a” in the second occurrence to “the” or “said.”

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-6, 8, 9, 11-16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Latos (4,992,721) in view of Shiga et al. (4,973,896).

- With respect to claims 1, 9, and 16, Latos discloses a system and method for controlling the system, comprising: a permanent magnet motor that is coupled with an engine so that the two rotate simultaneously (Fig. 2, #22 and #12 move simultaneously; see also col. 3, ll. 40-62); a first phase controlled rectifier that selectively couples the motor to a power source for providing power to the motor during an engine starting operation (Fig. 2, #26 selectively couples the motor #22 to 3-phase power). With respect to claim 16, Latos also discloses a gas turbine engine (col. 3, ll. 43-44; jet engine is interpreted as a gas turbine).

- Latos does not disclose a second rectifier.

- Shiga et al. discloses a rectifier circuit attached to an inverter unit (Fig. 4, #17).

Implementing the rectifier circuit with the inverter circuit of Latos (Fig. 2, #32) makes the Latos system have a second rectifier that couples the motor (Fig. 2, #22) to a load (Fig. 2, #16). The motivation to use a rectifier circuit is to output a more "reliable" signal to the bus.

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- Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to implement into the Latos system a rectifier, thereby providing the advantage of outputting a “rectified” output to the bus, as taught by Shiga et al.
  - With respect to claims 3 and 11, Latos discloses a power converter associated with the first rectifier that converts power from the source to a variable voltage (Fig. 2, #32 supplies variable voltage to #22 for starting the engine).
  - With respect to claims 4 and 12, Shiga et al. disclose a dc link capacitor bank (Fig. 32, Item “C”).
  - With respect to claims 5, 13, and 14, Shiga et al. disclose a rectifier attached to an inverter (Fig. 4, #17 attached to #18). A rectifier inherently converts three phase power into a constant DC voltage. Adding the rectifier circuit to Latos makes the inverter of Latos the power converter (Fig. 2, #32 is the power converter).
  - With respect to claims 6, 15, 19, and 20, Latos discloses a filter between the inverter and the load, where the filter provides a selected quality of power to the load (Fig. 2, #34).
  - With respect to claims 8 and 18, Latos discloses an inverter (Fig. 2, #32). An inverter inherently converts a dc voltage to a pulse width modulated signal.
4. Claims 2, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Latos and Shiga et al. as applied to claim 1 above.
- With respect to claims 2, 10, and 17, neither Latos nor Shiga et al. explicitly discloses the first and second rectifiers controlled so that one is conducting while the other is off. With respect to this feature, the examiner takes Official Notice.

- It is well known in the art and would have been obvious to one having ordinary skill in the art at the time of the invention that when the system is operating as a generator, the rectifier that supplies the motor with power is off. Furthermore, when the system operates as a starter, the rectifier that supplies the load with power is off. The motivation to control the rectifiers in this manner is because in the generator mode power should not be supplied to the motor. Similarly, when in the starting mode, power should not be supplied to the bus. This provides the advantage of protecting the motor circuitry by preventing reverse voltages.
5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Latos and Shiga et al. as applied to claims 1, 5, and 6 above, and further in view of Honda (2004/0008527).
- Latos and Shiga et al. do not disclose the filter comprising a differential mode filter in series with a common mode filter.
  - Honda discloses a differential mode filter in series with a common mode filter (Fig. 7, # 70). The motivation to use both filters in series is to filter both the differential mode noise and the common mode noise ([0051]).
  - Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention that the filter of Latos and Shiga et al. would include differential and common mode filters, respectively, thereby providing the advantage of filtering differential mode noise and common mode noise, as taught by Honda.

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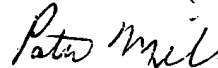
*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Miller whose telephone number is 571-272-2070. The examiner can normally be reached on M-F, 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 41. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick Miller  
Examiner  
Art Unit 2837

pm  
September 27, 2005

  
MARLON T. FLETCHER  
PRIMARY EXAMINER